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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/700,365
Filing Date: November 03, 2003
Appellant(s): PUNAGANTI VENKATA ET AL.

PUNAGANTI VENKATA ET AL
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 09/08/2008 appealing from the Office action mailed 03/21/2008.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

2005/0078644	Tsai et al.	10-2003
6,130,917	Monroe	03-1997

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 101

1. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2. **Claims 8-14** are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

3. With regard to **claim 8,** the instant claim is directed towards a service discovery system with two service discovery agents, wherein these service discovery agents are simply application software (specification, page 13, lines 1-24) not yet being stored into a computer readable storage medium, thus they are software alone. Claim directed towards software alone is per se nonstatutory. Claims 9-14 are rejected under the same rationale as of claim 8.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims **15-18** are rejected under 35 U.S.C 102 (e) as being anticipated by **Tsai et al. (publication no.: US 2005/0078644 A1).**

With respect to **claim 15,** Tsai teaches a network host, comprising:

means for receiving service discovery queries from a service discovery agent (Tsai, fig. 1, page 2, paragraph 11);

means for discovering services within a domain of the network host in response to the service discovery queries (Tsai, page 1, paragraph 10, and page 2, paragraph 11), wherein the domain of the network host includes a local service discovery protocol operating via local network (Tsai: page 1, paragraph 10, noted the location-based services, i.e: nearby restaurant, local-time synchronization) and a remote service discovery protocol operating via an Internet host (Tsai: page 1, paragraph 10, noted that the network includes the Internet access server 16);

means for providing information describing the services discovered within the domain of the network host to the service discovery agent, wherein the information is provided in a uniform format that is independent of the vocabularies and behaviors of the local and remote service discovery protocols (Tsai, page 2, paragraph 12 and page 4, paragraph 24, noted that the service information is changed into a format that can be read and displayed by wireless client device 22); and

means for accessing services within a domain of the service discovery agent (Tsai, page 2, paragraph 13).

With respect to **claim 16,** Tsai teaches the network host according to claim 15, further comprising means for providing access to the services within the domain of the

service discovery agent to network entities within the domain of the network host (Tsai, page 2, paragraph 13).

In regard to **claims 17-18** the limitations of these claims are substantially the same as those in claims 15-16, but rather in computer instruction form. Therefore the same rationale for rejecting claims 15-16 is used to reject claims 17-18. By this rationale **claims 17-18** are rejected.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. **Claims 1-14, and 19-24** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Tsai et al. (publication no.: US 2005/0078644 A1)** in view of **Monroe (patent no.: US 6,130,917).**

With respect to **claim 1,** Tsai teaches a method for providing uniform service discovery through the use of a plurality of service discovery protocols, comprising:

generating service discovery queries from a user interface (Tsai, page 2, paragraph 11, noted that the wireless client 22 generates request);

wherein the domain of the network host includes a local service discovery protocol operating via local network (Tsai: page 1, paragraph 10, noted the location-

based services, i.e: nearby restaurant, local-time synchronization) and a remote service discovery protocol operating via an Internet host (Tsai: page 1, paragraph 10, noted that the network includes the Internet access server 16);

receiving results indicative of services found from each of the plurality of service discovery protocols (Tsai, page 1, paragraphs 9-10, noted that the wireless protocols could be Bluetooth, UPnP, or SLP) in response to the service discovery queries (Tsai, page 2, paragraphs 11 and 13, noted that the wireless access point 12 receives service information from service discovery server 14); and

translating the results into a uniform format for display on the user interface, wherein the uniform format is independent of the vocabularies and behaviors of the plurality of service discovery protocols (Tsai, page 2, paragraph 12 and page 4, paragraph 24, noted that the service information is changed into a format that can be read and displayed by wireless client device 22).

However, Tsai does not explicitly teach a method of translating the service discovery queries into formats required by a plurality of service discovery protocols.

In the same field of Monroe teaches a method of translating the service discovery queries into formats required by a plurality of service discovery protocols (Monroe, fig. 3-5, col.4, lines 45-61, and col. 5, lines 13-40).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to incorporate the method of translating the service discovery queries into formats required by a plurality of service discovery protocols as taught by Monroe in Tsai's to permit real time transmission regardless of data format and permits

transmission of source data to a variety of stations using protocols of either transmitting/receiving stations (Monroe, col. 2, Summary Of the Invention).

With respect to **claim 2,** Tsai teaches the service discovery engine (Tsai, fig. 1, Wireless Access Point 12). However, Tsai does not explicitly teach a method of translating the service discovery queries into a format required by a service discovery engine.

In the same field of Monroe teaches a method of translating the service discovery queries into formats required by a plurality of service discovery protocols (Monroe, col.2, lines 44-63).

With respect to **claim 3,** Tsai teaches the method according to claim 2, wherein the service discovery engine compiles service discovery results in response to the service discovery queries and provides the service discovery results to the user interface (Tsai, page 2, paragraph 24, noted that the service information is displayed to the wireless client device 22).

With respect to **claim 4,** Tsai teaches the method according to claim 3, wherein the service discovery engine gains access to the plurality of services found (Tsai, page 2, paragraph 12).

With respect to **claim 5,** Tsai teaches the method according to claim 4, wherein the service discovery engine provides access to the plurality of services found to a plurality of network entities within a domain of the service discovery engine (Tsai, page 2, paragraph 13 and page 4 paragraph 24, noted that service information is transmitted to multiple wireless client devices within a coverage area).

With respect to **claim 6,** Tsai teaches the method according to claim 1, wherein the plurality of service discovery protocols includes Bluetooth service discovery protocol (Tsai, page 1, paragraphs 9, noted that the wireless protocols could be Bluetooth).

With respect to **claim 7,** Tsai teaches the method according to claim 1, wherein the plurality of service discovery protocols includes one or more of Service Location Protocol (SLP), Salutation, Jini, Bluetooth, and Universal Plug and Play (UPnP) (Tsai, page 1, paragraphs 9-10, noted that the wireless protocols could be Bluetooth, UPnP, or SLP).

With respect to **claim 8,** Tsai teaches a service discovery system, comprising:

a first service discovery agent coupled to receive service discovery queries in a user format (Tsai, fig. 1 and page 2, paragraph 11, noted that wireless access point 12 receives request from wireless client device 22), wherein the plurality of service discovery protocols include a local service discovery protocol operating via a local network (Tsai: page 1, paragraph 10, noted the location-based services, i.e: nearby restaurant, local-time synchronization) and a remote service discovery protocol operating via an Internet host (Tsai: page 1, paragraph 10, noted that the network includes the Internet access server 16); and

a second service discovery agent (Tsai, fig. 1, service discovery server 14) coupled to receive service discovery queries from the first service discovery agent and in response, to provide service discovery responses to the first service discovery agent (Tsai, page 2, paragraphs 11-12, noted that service discovery server 14 delivers information relating to discovered services to the wireless access point 12), wherein the

second service discovery agent is coupled to access services discovered by the first service discovery agent (Tsai, fig. 1, page 2, paragraphs 11-12).

However, Tsai does not explicitly teach a method of translating the service discovery queries into formats required by a plurality of service discovery protocols.

In the same field of Monroe teaches a method of translating the service discovery queries into formats required by a plurality of service discovery protocols (Monroe, fig. 3-5, col.4, lines 45-61, and col. 5, lines 13-40).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to incorporate the method of translating the service discovery queries into formats required by a plurality of service discovery protocols as taught by Monroe in Tsai's to permit real time transmission regardless of data format and permits transmission of source data to a variety of stations using protocols of either transmitting/receiving stations (Monroe, col. 2, Summary Of the Invention).

With respect to **claim 9,** Tsai teaches the service discovery system according to claim 8, wherein the first service discovery agent comprises a service configuration tool coupled to allow first discovery agent operation independent of second service discovery agent operation (Tsai, fig. 2 and page 2 paragraph 15).

In regard to **claim 10** the limitations of this claim are substantially the same as those in claim 2. Therefore the same rationale for rejecting claim 2 is used to reject claim 10. By this rationale **claim 10 i**s rejected.

With respect to **claim 11,** Tsai teaches the service discovery system according to claim 10, wherein the canonical query transform is configured with a programmable number of format capabilities (Tsai, fig. 2 and page 2 paragraph 16).

With respect to **claim 12,** Tsai teaches the service discovery system according to claim 11, wherein the programmable number of format capabilities is dependent upon a number of plug in modules installed within the canonical query transform (Tsai, fig. 2 and page 2 paragraph 16).

In regard to **claim 13** the limitations of this claim are substantially the same as those in claim 6. Therefore the same rationale for rejecting claim 6 is used to reject claim 13. By this rationale **claim 13** is rejected.

In regard to **claim 14** the limitations of this claim are substantially the same as those in claim 7. Therefore the same rationale for rejecting claim 7 is used to reject claim 14. By this rationale **claim 14** is rejected.

In regard to **claim 19** the limitations of this claim are substantially the same as those in claim 8. Therefore the same rationale for rejecting claim 8 is used to reject claim 19. By this rationale **claim 19** is rejected.

In regard to **claim 20** the limitations of this claim are substantially the same as those in claim 9. Therefore the same rationale for rejecting claim 9 is used to reject claim 20. By this rationale **claim 20** is rejected.

In regard to **claim 21** the limitations of this claim are substantially the same as those in claim 10. Therefore the same rationale for rejecting claim 10 is used to reject claim 21. By this rationale **claim 21** is rejected.

In regard to **claim 22** the limitations of this claim are substantially the same as those in claim 11. Therefore the same rationale for rejecting claim 11 is used to reject claim 22. By this rationale **claim 22** is rejected.

In regard to **claim 23** the limitations of this claim are substantially the same as those in claim 1, but rather in a computer instruction form. Therefore the same rationale for rejecting claim 1 is used to reject claim 23. By this rationale **claim 23** is rejected.

With respect to **claim 24,** Tsai teaches the computer-readable medium according to claim 23, further comprising instructions to perform steps comprising:

providing the service discovery queries to a network host (Tsai, fig. 1, page 2, paragraph 12); and

receiving responses from the network host in response to the provided service discovery queries (Tsai, fig. 1, page 2 paragraphs 11-12).

(10) Response to Argument

Appeal argues rejections of claims 8-14 under 35 U.S.C. 101

8. On pages11-13 of Appellant's Brief, Appellant argues the rejection of the claims 8-14 under 35 USC 101 for being directed towards software per se.

First, it is noted that Appellant does not argue that the claimed subject matter includes hardware components, and is not directed towards software along. For example, on page 12, paragraph 2, Appellant quotes the specification as stating, "those skilled in the art will be readily able to combine software created as described with appropriate general purpose or special purpose computer hardware to create a service

discovery system and method in accordance with the present invention". However, this does not create a limiting definition that would require the "service discovery system" of claim 8 to be directed towards a combination of hardware and software. Rather, this passage only indicates that the software of the system maybe used with hardware devices.

The instant claim, meanwhile, only comprises a "first discovery agent" and "second discovery agent", both of which are unquestionably software alone. According to MPEP 2106.01, "functional descriptive material consists of data structures and computer programs which impart functionality when employed as a computer component." Thus, the instant claim in view of the specification passage cited above is clearly functional descriptive material, as the claimed subject matter is "readily able to combine software created as described with appropriate general purpose or special purpose computer hardware," meaning that functionality is imparted into the general purpose or special purpose computer.

Further, according to MPEP 2106.01, "Both types of descriptive material are nonstatutory when claimed as descriptive material *per se*, 33 F.3D at 1360, 31 USPQ2d at 1759. When functional descriptive material is recorded on some computer-readable medium, it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized."

In view of the above, it is clear that the claimed system is merely functional descriptive material, which is nonstatutory, as it is claimed as descriptive material (e.g. software) *per se*. Accordingly, the rejection of claims 8-14 under 35 USC 101 is proper.

Appeal argues claims 15-18

9. On pages14-15 of Appellant's Brief, Appellant argues that "Tsai neither inherently nor expressly describes an element that can utilize both a local service discovery protocol operating via a local network and a remote service discovery protocol operating via an Internet host". And further argues that "Nowhere does Tsai teach that an *Internet host operates a remote service protocol that is discovered by a host on a local network*." (emphasis added). This argument is not deemed persuasive.

In response to Appellant's argument, the examiner disagrees. The examiner maintains the position and asserts that the "local service discovery protocol" as recited in the claim is equivalent to the *location-based services* as disclosed by Tsai (page 1, paragraph 10), and the "remote service discovery protocol" as recited in the claim is equivalent to the *Internet access server 10* as disclosed by Tsai (page 1, paragraphs 9-10), noted that the *internet access server 10* is connected to a network medium 24.

In addition, in response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., *Internet host operates a remote service protocol that is discovered by a host on a local network*) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are

not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Therefore, presently claimed invention is not patentable over Tsai.

10. Appellant's arguments toward claims 16 &18 are relied upon the arguments addressed in claim 15; therefore again presently claimed invention is not patentable over Tsai.

Appeal argues claims 1, 8, 19 and 23

11. On pages14-15 of Appellant's Brief, Appellant argues that "Monroe fails to expressly or inherently describe translating between different service discovery protocols, nor does more teach or suggest a service discovery query.", and further argues that "Monroe describes the use of a single "universal" station to perform conversions for any of "a variety of sending and receiving units" (Monroe, col. 4, lines 63-65), but fails to expressly describe the use of service discovery to locate services of the universal station or the sending/receiving stations. This argument is not deemed persuasive.

In response to Appellant's argument, the examiner disagrees. It is noted that Appellant acknowledges that "Monroe is directed to a "protocol scheme [where] destination or receiving station is identified by a source or sending station in order to permit automatic reformatting of the source data into a compatible format and protocol scheme before transmission is initiated." (Brief: page 16, paragraph 3)". It is clearly shown as above, that Monroe's invention directed towards a method of translating/converting request data formats into a compatible format for any type of

protocol scheme required for any of the sending and receiving units. Therefore, it is reasonable for one of ordinary skilled in the art at the time of invention to incorporate such feature into in the service discovery protocols of Tsai's invention.

In addition, in response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., *Monroe is silent regarding any automatic configuration of sending/receiving units that allow the units to discover services of the universal station, or properties of these services)* are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Therefore, presently claimed invention is not patentable over Tsai.

Appeal argues claims 9 and 20

12. On pages 18-19 of Appellant's Brief, Appellant argues that "it is not clear that any of the service discovery components (e.g., controller 34 and service discovery servers) are operating independently from each other in either embodiment". This argument is not deemed persuasive.

In response to Appellant's argument, the examiner disagrees. It appears that the Appellant is misinterpreting the prior art of record by fragmenting and only citing a portion of the reference, e.g. paragraph 15 of Tsai. Appellant is reminded that when viewing and determining a reference one has to take the reference as whole into consideration. In the instant case, claims 9 and 20 only require that "*the first service*

discovery agent comprises a service configuration tool coupled to allow first discovery agent operation independent of second service discovery agent operation", in another words, the first service discovery agent performs operation independent of the second service discovery agent. Similarly, in the case of Tsai, Tsai teaches two network medium (e.g., wired or wireless) for the Internet access server 16 and location based services (Tsai; fig. 1, page 1, paragraph 9 and page 2, paragraph 15). One of ordinary skill in the art at the time of invention would be able to realize that the operations performed via wired connection is independent of the wireless connection. Therefore, presently claimed invention is not patentable over Tsai in view of Monroe.

Appeal argues claims 2-7 and 10-14, 21, 22 and 24

13. Appellant's arguments toward claims 2-7 and 10-14, 21, 22 and 24 are relied upon the arguments addressed in claims 1, 8, 19 and 23; therefore again presently claimed invention is not patentable over Tsai.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/L. L./

/Lin Liu/

Examiner, Art Unit 2445

Conferees:

/Jason D Cardone/
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